UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,473	12/21/2001	Eli Abir	16827.018	4346

7590 07/07/2006

Michael J. Songer
Arnold & Porter
555 Twelfth Street, N.W.
Washington, DC 20004-1206

EXAMINER	
WOZNIAK, JAMES S	

ART UNIT	PAPER NUMBER
2626	

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/024,473	ABIR, ELI	
	Examiner	Art Unit	
	James S. Wozniak	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *2-9* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 10-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 December 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Groups I and III (Claims 1 and 10-20) in the reply filed on 4/25/2006 is acknowledged. Claims 2-9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the method for converting document content as recited in claims 1, 10, 11, 17, and the corresponding computer system for accomplishing such a method as recited in claim 19 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must

be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:

The description portion of this application contains a computer program listing consisting of more than three hundred (300) lines. In accordance with 37 CFR 1.96(c), a computer program listing of more than three hundred lines must be submitted as a computer program listing appendix on compact disc conforming to the standards set forth in 37 CFR 1.96(c)(2) and must be appropriately referenced in the specification (see 37 CFR 1.77(b)(5)). Accordingly, applicant is required to cancel the computer program listing appearing in the specification on pages 45-54, file a computer program listing appendix on compact disc in compliance with 37 CFR 1.96(c) and insert an appropriate reference to the newly added computer program listing appendix on compact disc at the beginning of the specification.

Appropriate correction is required.

Claim Objections

4. **Claims 10-18** are objected to because of the following informalities:

With respect to claim 10, line 3 "the document" should be changed to --a document-- in order to provide proper antecedent basis.

With respect to Claims 11 and 17, line 4, "the largest delimited portion of the document" should be changed to --a largest delimited portion of a document-- in order to provide proper antecedent basis.

With respect to claim 12, line 1, "the additional step" should be changed to --an additional step-- in order to provide proper antecedent basis.

With respect to Claims 13 and 15, "the form of language" should be changed to --a form of language-- in order to provide proper antecedent basis.

With respect to Claims 14 and 16, "the form of a word" should be changed to --a form of a word-- in order to provide proper antecedent basis.

Claim 18 fails to correct the minor informality of the objected claim upon which it depends, and thus, is also objected to due to the aforementioned informality.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 11-16** are rejected under 35 U.S.C. 102(e) as being anticipated by Chanod et al *(U.S. Patent: 6,393,389)*.

With respect to **Claim 11**, Chanod discloses:

Providing content comprising data segments in a first state associated with data segments in a second state *(multi-token expressions in a first language associated with multi-token expressions in a second language, Col. 8, Lines 21-26)*;

Selecting the largest delimited portion of the document to be translated that begins with the first segment of the document and exists in a database *(selecting a largest portion of tokenized document text in an iterative process until the end of the document is reached, Col. 10, Lines 20-67)*;

Retrieving from the database a segment in the second state associated with the located first segment in the first state *(corresponding translated token results, Col. 7, Line 66- Col. 8, Line 20; Col. 13, Lines 27-41; and Col. 14, Lines 20-40)*;

Selecting at least a second delimited portion in the first state that has one or more overlapping segments with the previous delimited segment in the first state *(overlapping tokens, Col. 10, Lines 20-67)*;

Retrieving from the database a segment in the second state associated with the located second segment in the first state *(retrieving a translation result for an overlapping token, Col. 14, Lines 20-44)*;

Returning the two data segments in the first state have overlapping content as a single data segment in the first state *(retaining a larger overlapping token in a first language, Col. 10, Lines 37-67)*;

Returning, if the two data segments in the second state have overlapping content, a single data segment in the second state *(multiple overlapping translation results which are limited to a single corresponding single token by retaining the largest overlapping token in a first language, Col. 10, Lines 37-67; and Col. 14, Lines 20-30)*; and

Associating said single data segment in said first state with said single data segment in said second state, thereby returning a conversion of said single data segment from said first state to said second state *(returning a final translation result, Col. 15, Lines 37-56)*.

With respect to **Claim 12**, Chanod discloses iterative translation processing of a document *(Col. 13, Lines 27-41)*.

With respect to **Claim 13**, Chanod discloses the method for language translation as applied to Claim 11.

With respect to **Claim 14**, Chanod discloses tokens that correspond to individual words or word sequences *(Col. 6, Lines 48-54)*.

With respect to **Claim 15**, Chanod discloses the method for language translation as applied to Claim 11.

With respect to **Claim 16**, Chanod discloses tokens that correspond to individual words or word sequences *(Col. 6, Lines 48-54)*.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. **Claims 1, 10, and 19-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirakawa et al *(U.S. Patent: 5,579,224)* in view of Tominaga *(U.S. Patent: 5,311,429)*.

With respect to **Claims 1 and 19**, Hirakawa discloses:

Receiving content expressed in a first state *(document in a first language, Col. 4, Lines 3-33)*;

Parsing the content expressed in a first state into a plurality of segments (extracting individual segments from a document in a first segment, Col. 4, Line 33-52);

Accessing a third segment of the content expressed in a second state, said third segment corresponding to one of the plurality of segments *(corresponding sentence in a second language, Col. 4, Lines 53-63 and Col. 7, Line 8- Col. 8, Line 15)*;

Accessing an additional segment of the content expressed in the second state, the additional segment corresponding to the other one of the first and second segments *(plurality of corresponding sentences in a second language used in translation, Col. 4, Lines 53-63 and Col. 7, Line 8- Col. 8, Line 15)*; and

Providing the content expressed in the second state *(outputting a translated sentence, Col. 10, Lines 36-38)*.

Although Hirakawa teaches a method for translating a plurality of extracted sentences from a document, Hirakawa does not teach a means for processing sentences having overlapping portions by combining segments (sentences) having such portions. Tominaga, however, discloses a sentence processing means that combines sentences having overlapping portions into a single sentence for translation *(Col. 14, Lines 42-61; Fig. 14; and Col. 5, Lines 15-32)*.

Hirakawa and Tominaga are analogous art because they are from a similar field of endeavor in language translation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Hirakawa with the sentence generation means disclosed by Tominaga in order to achieve natural language translation processing that easily performs the maintenance of co-occurrence relations and avoids duplication of dictionary information *(Col. 2, Lines 30-34; and Col. 11, Lines 19-27)*.

With respect to **Claim 10**, Hirakawa discloses:

A method for translating idea content from a first state to a second state comprising the steps of:

Utilizing a database of segment associations between content in said first state and said second state to convert the content of the document in a first state into the document of a second state, wherein said conversion includes examining segments of content in said first state and segments of content in said second state (sentences in a first and second language *(Col. 4, Lines 33-63; and correspondence dictionary, Col. 7, Line 8- Col. 8, Line 15)*; and

Associating the content of said first state content with said second state content (completing a language translation, Col. 10, Lines 36-38).

Although Hirakawa teaches a method for translating a plurality of extracted sentences from a document, Hirakawa does not teach a means for processing sentences having overlapping portions by combining segments (sentences) and removing overlapping portions. Tominaga, however, discloses a sentence processing means that combines sentences having overlapping portions into a single sentence and removes certain similar words *(Col. 14, Lines 42-61; removal of "is" in a first sentence and removal of "girl" in a second sentence, Fig. 14; and Col. 5, Lines 15-32)*.

Hirakawa and Tominaga are analogous art because they are from a similar field of endeavor in language translation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Hirakawa with the sentence generation means disclosed by Tominaga in order to achieve natural language translation processing that easily performs the maintenance of co-occurrence relations and avoids duplication of dictionary information *(Col. 2, Lines 30-34; and Col. 11, Lines 19-27)*.

With respect to **Claim 20**, Hirakawa further discloses the second language document memory unit containing documents having a plurality of sentences *(segments)*, as is shown in Fig. 2 *(Element 2)*.

9. **Claims 17-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chanod et al *(U.S. Patent: 6,393,389)* in view of Tominaga *(U.S. Patent: 5,311,429)*.

With respect to **Claim 17**, Chanod discloses:

Providing content comprising data segments in a first state associated with data segments in a second state *(multi-token expressions in a first language associated with multi-token expressions in a second language, Col. 8, Lines 21-26)*;

Selecting the largest delimited portion of the document to be translated that begins with the first segment of the document and exists in a database *(selecting a largest portion of tokenized document text in an iterative process until the end of the document is reached, Col. 10, Lines 20-67)*;

Retrieving from the database a segment in the second state associated with the located first segment in the first state *(corresponding translated token results, Col. 7, Line 66- Col. 8, Line 20; Col. 13, Lines 27-41; and Col. 14, Lines 20-40)*;

Selecting at least a second delimited portion in the first state that has one or more overlapping segments with the previous delimited segment in the first state *(overlapping tokens, Col. 10, Lines 20-67)*;

Retrieving from the database a segment in the second state associated with the located second segment in the first state *(retrieving a translation result for an overlapping token, Col. 14, Lines 20-44)*;

Chanod also discloses iterative translation processing of a document *(Col. 13, Lines 27-41)* and processing of simple non-overlapping tokens *(Col. 10, Lines 43-54)*.

Although Chanod teaches a method for translating a plurality of overlapping token segments from a document, Chanod does not teach a means for processing sentences having overlapping portions by combining segments (sentences) having such portions. Tominaga, however, discloses a sentence processing means that combines sentences having overlapping

portions into a single sentence in translation processing *(Col. 14, Lines 42-61; Fig. 14; and Col. 5, Lines 15-32)*.

Chanod and Tominaga are analogous art because they are from a similar field of endeavor in language translation. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Chanod with the sentence generation means disclosed by Tominaga in order to achieve natural language translation processing that easily performs the maintenance of co-occurrence relations and avoids duplication of dictionary information *(Col. 2, Lines 30-34; and Col. 11, Lines 19-27)*.

With respect to **Claim 18**, Chanod discloses iterative translation processing of a document *(Col. 13, Lines 27-41)*.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Kumano et al *(U.S. Patent: 4,821,230)*- teaches a means for connecting clauses in a translation process.

Steinberg et al *(U.S. Patent: 5,365,433)*- teaches a system for combining sentences having the same subject.

Kaji et al *(U.S. Patent: 5,907,821)*- teaches a means for extracting translation data from a bilingual text.

Gustaldo et al *(U.S. Patent: 6,473,729)*- teaches a method for performing language translation by connecting segments in a translation database.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached at (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak
6/15/2006

DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600